

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Wausau Service Center
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May 18, 2017

FID #: 804009140
Bayfield County
HW/LIC

MR BRADLEY NAVE
THE CHEMOURS COMPANY FC LLC
500 W JEFFERSON ST
SUITE 1600
LOUISVILLE KY 40202

Subject: Renewal Request – Hazardous Waste Remediation Variance for Biodegradation of Contaminants and Removal of Residual Product and Debris
Former DuPont Barksdale Works, Barksdale, Wisconsin
Conditional Approval
EPA ID #: WIR000133447 – WDNR BRRTS #02-04-000156

Dear Mr. Nave:

The Wisconsin Department of Natural Resources (Department) has completed its review of the correspondence titled *Remediation Variance Renewal Request* for the former DuPont Barksdale Works under ch. NR 724, Wis. Adm. Code, and s. NR 670.079, Wis. Adm. Code, dated February 22, 2017. AECOM submitted the document on behalf of The Chemours Company FC LLC (Chemours) and is requesting the Department to approve the renewal of the *Revised Remediation Variance Request for Removal of Residual Product and Debris*, which had received Department approval on May 22, 2012.

The Department received a plan review fee of \$1,600.00 in accordance with ch. NR 670, Wis. Adm. Code, Appendix II. This fee covers the review of the remediation variance request.

The Department received a copy of the required Class 1 Public Notice, published in the local newspaper, The Ashland Daily Press, on March 10, 2017. The Department did not receive any comments on the proposed variance within the 30 days of publication of this notice.

AECOM is proposing the physical separation of residuals and debris from the biologically treatable contaminated soil, and proposing alternative cell construction techniques in order to evaluate biodegradation processes at the site. The segregated soil will not undergo any active management for ex-situ treatment and will be returned to the ground within the biological treatment areas where it will continue to undergo bioremediation testing. The residuals and debris removed from the test soil will be characterized and managed according chs. 600-679, Wis. Adm. Code, Hazardous Waste Management, until the wastes are shipped off-site for appropriate disposal.

To help reduce potential redundancies in reporting, the Department will allow the complete report required under Condition 8 of the Conditions of Issuance section to be combined with the last annual report required under Condition 7 and the interim action and/or remedial action plan or plans in Condition 9 of that section.

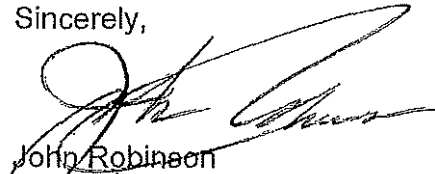
This Remediation Variance Approval is granted for a term of five years and will expire on May 18, 2022.

With this letter, the Department is conditionally approving the *Remediation Variance Renewal Request* for the former DuPont Barksdale Works, dated February 22, 2017.

A copy of this Variance must be kept by Chemours on the Barksdale Works Property. The Variance copy should be made available to field staff conducting the variance activities and the hazardous waste activities on the Barksdale Works Property.

If you have any questions regarding this matter, please contact DNR Project Manager Chris Saari by phone at (715) 685-2920 or by email at Christopher.Saari@Wisconsin.gov, or Jill Schoen by phone at (715) 839-2788 or by email at Jill.Schoen@Wisconsin.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John Robinson", written over a circular stamp or mark.

John Robinson
Northern Region Supervisor
Remediation & Redevelopment Program

Attach.

cc: Chris Saari – WDNR Ashland
Jill Schoen – WDNR Eau Claire
Ed Lynch – WDNR Madison WA/5
Judy Fassbender – WDNR Madison RR/5
Cary Pooler – AECOM, Louisville, Kentucky
Paul Bretting – Bretting Development Corp.

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

REMEDATION VARIANCE RENEWAL REQUEST

REVISED BIOREMEDIATION PILOT STUDY AND
HAZARDOUS WASTE REMEDIATION VARIANCE FOR BIODEGRADATION OF
CONTAMINANTS AND REMOVAL OF RESIDUAL PRODUCT AND DEBRIS
CONDITIONAL APPROVAL
FORMER DUPONT BARKSDALE EXPLOSIVES PLANT, BARKSDALE, WISCONSIN
FID #: 804009140
US EPA ID # WIR000133447

FINDINGS OF FACT

The Department finds that:

1. Bretting Development Corporation (BDC) owns the property located at 72315 State Highway 13, Barksdale, Bayfield County, Wisconsin (the DuPont Property).
2. Bradley Nave of The Chemours Company FC LLC (Chemours), 500 West Jefferson Street, Suite 1600, Louisville, Kentucky, 40202, is the contact for remedial activities at the DuPont Property. As a result of a corporate reorganization, Chemours assumed remediation operations at the DuPont Property on February 1, 2015. Chemours was separated from the E.I. du Pont de Nemours & Company (DuPont) as a stand-alone, publically traded company on or about July 1, 2015.
3. E.I. du Pont de Nemours & Company operated the former DuPont Barksdale Explosives Plant at the DuPont Property from 1904 to 1971. The facility primarily produced dynamite, nitroglycerin and trinitrotoluene (TNT) for the U.S. armed forces and the mining industry in the Lake Superior region. BDC purchased the DuPont Property in June 1986.
4. In June 1997, DNR Water Supply Specialists sampled three private wells adjacent to the former DuPont Barksdale Explosives Plant. Explosives-related contaminants were detected in one of the wells. DuPont Corporate Remediation Group (CRG) then initiated private well monitoring and site investigation activities in September 1997.
5. On June 5, 2007, DuPont CRG submitted a document entitled *2007 DNT Biopilot Field Study Design and Work Plan*. This document described a proposed field pilot study for an *in situ* biodegradation approach to remediate dinitrotoluene (DNT) isomers in surficial soil (biopilot cells).
6. On April 28, 2011, URS submitted the *Remediation Variance Request for Removal of Residual Product and Debris* to the Department. The Variance Request sought to facilitate Research and Development activities on degradation of DNT and TNT in soil. The presence of residual product and debris inhibits the ability of URS to optimize and expedite the soil remediation testing. URS

proposed physical separation of residuals and debris from biologically treatable contaminated soil.

7. On December 20, 2011, URS submitted a *Revised Remediation Variance Request for Removal of Residual Product and Debris* to the Department.
8. On February 17, 2012, URS submitted a (final) *Revised Remediation Variance Request for Removal of Residual Product and Debris* to the Department.
9. On May 22, 2012, the Department conditionally approved the *Revised Remediation Variance Request for Removal of Residual Product and Debris*. The conditional approval was granted for a term of five years with an expiration date of May 22, 2017.
10. On February 22, 2017, AECOM submitted an electronic version of the *Remediation Variance Renewal Request* to the Department. A hard copy of the document was received by the Department on March 8, 2017.
11. On February 28, 2017, Chemours submitted the plan review fee of \$1,600.00 to the Department in accordance with Chapter NR 670, Wisconsin Administrative Code, Appendix II.
12. Chemours published a public notice in accordance with s. NR 670.79, Wis. Adm. Code, in the Ashland Daily Press on March 10, 2017. No public comments or a request for an information hearing were received by the Department during the 30-day public notice period. No additional public participation is necessary.
13. The Department believes this variance is being issued in the manner consistent with sections 7003 of RCRA or 121(e) of CERCLA.
14. EPA has acknowledged the Department can use state variance authority. In such cases, a state hazardous waste operating license is not needed. This is identified in DNR guidance entitled "GUIDANCE FOR HAZARDOUS WASTE REMEDIATION RR-705 (May 2006)". A draft copy of this variance was sent to EPA on April 18, 2017. No comments were received from EPA.

CONCLUSIONS OF LAW

1. The Department promulgated chs. NR 660 to 679, Wis. Adm. Code, establishing the minimum requirements for hazardous waste management under the authority of ss. 291.001 through 291.97, Wis. Stats.
2. The Department has the authority under s. NR 670.079(1), Wis. Adm. Code, to issue a remediation variance from the requirements of s. 291.25, Wis. Stats., if it determines that the application for or compliance with the terms or conditions of any license required under chs. NR 660 to 679 would cause undue or unreasonable hardship and the remediation variance would not result in undue harm to human health or the environment. The remediation options presented in the February 17, 2012, revised remediation variance request, as described in

Finding of Fact #8 above, demonstrates undue and unreasonable hardship to warrant the issuance of the remediation variance.

3. The Department has the authority under s. NR 670.079(2)(d), Wis. Adm. Code, to revoke the remediation variance at any time if it is determined that revocation is appropriate to protect human health or the environment.
4. The Department has the authority under s. NR 670.079(2)(e), Wis. Adm. Code, to require compliance with the appropriate requirements of chs. NR 660 to 679 and chs. NR 700 to 750, Wis. Adm. Code as a condition of issuance, in order to protect human health or the environment.
5. The Department has the authority under s. 291.31, Wis. Stats., and s. NR 670.079(4), Wis. Adm. Code, to issue the following conditional remediation variance for contaminated soil.

CONDITIONS OF ISSUANCE

The Department hereby grants Chemours a renewal to the previously approved remediation variance under s. NR 670.079, Wis. Adm. Code, and s. 291.31, Wis. Stats., to the requirements for obtaining a hazardous waste operating license under chs. NR 660 through 679, Wis. Adm. Code. The remediation variance is for the excavation of soil containing residual product and debris within an agreed upon area of contamination at the former DuPont Barksdale Explosives Plant as described in the February 17, 2012, *Revised Remedial Action Plan and Hazardous Waste Remediation Variance for Removal of Residual Product and Debris*. The February 22, 2017 *Remediation Variance Renewal Request* transmits Chemours' request to continue the bioremediation research discussed in the February 2012 document. This remediation variance is granted for a term of five years, ending May 18, 2022. The granting of this remediation variance is subject to the following conditions:

1. This approval is based on the information available to the Department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity. Likewise, the Department accepts proposals to modify approvals, as provided for in state statutes and administrative codes.
2. The granting of this remediation variance does not relieve Chemours of its obligation to meet all other federal, state or local permit or approval requirements.
3. All waste generated by the variance activities, such as site debris, shall be properly characterized as solid or hazardous waste and managed accordingly.
4. Adequate security to prevent entry of unauthorized personnel shall be maintained on the DuPont Property during the remediation activities.
5. In accordance with s. 291.91, Wis. Stats., Department employees and authorized representatives shall be allowed access to the facility and to the owner or

operators' hazardous waste records, at all reasonable times, for the purposes of inspection and sample collection.

6. Any changes in hazardous waste remediation activities which are not identified in the *Revised Remediation Variance Request for Removal of Residual Product and Debris*, dated February 17, 2012, or the *Remediation Variance Renewal Request*, dated February 22, 2017, will constitute a remediation variance modification. Modifications to this remediation variance shall be submitted as a Class 1 modification request requiring Department review and approval in accordance with s. NR 670.042(1), Wis. Adm. Code. The submittal shall include the appropriate fee stated in ch. NR 670, Wis. Adm. Code, Appendix II.
7. Annual progress reports shall be submitted to the Department in accordance with s. NR 724.13(3), Wis. Adm. Code, until this variance approval ends on May 18, 2022. Such reports shall be submitted within 15 days of the anniversary date of this approval, May 18, and shall include:
 - a. Documentation of the type and amount of product residuals and debris removed from biopilot cells. Documentation of any characterization and container storage of product residuals and debris removed from biopilot cells. Documentation of disposal of any product residuals and debris removed from the biopilot cells including manifest copies.
 - b. Documentation of any management, including consolidation, of discrete areas where impacted soil is located within narrow locations such as former ditches or locations that are contorted by the layout of former building features. Documentation of the location of those areas and the amount of soil that is moved. Documentation of the location of areas where the soil combined from discrete source areas is managed.
 - c. Documentation of any alternative treatment of large debris that facilitates management, including washing and physical resizing of large debris for off-site disposal. Documentation of management of all impacted waste streams generated by these activities, including amounts and volumes of waste treated and generated.
8. A complete report in accordance with ss. NR 724.15 and 716.15, Wis. Adm. Code, documenting the remedial action (excavation, soil, air and groundwater confirmation samples, storage and treatment of hazardous waste, proper disposal of excavated soils, photos, groundwater investigation results, etc.) shall be submitted at the conclusion of the treatment activities. The Department will allow the complete report in this Conditions of Issuance section to be combined with the last annual report required in Condition 7 and the interim action and/or remedial action plan or plans in Condition 9 of this section.
9. Prior to the May 18, 2022 expiration date of this remediation variance, an interim action and/or remedial action plan or plans shall be submitted to the Department in accordance with ch. NR 724, Wis. Adm. Code. The interim action and/or remedial action plans shall propose implementation of the findings of the bioremediation research covered by this remediation variance, to address areas of residual explosives-related contamination beyond the scale of the existing

biopilot cells, and to address all or a subset of the site-related constituents of concern while site investigation is ongoing. The Department will work with Chemours to determine appropriate performance standards and/or residual contaminant levels. Discussions regarding the applicability of the findings shall commence upon issuance of the June 2021 annual progress report.

10. One copy of all required documentation shall be submitted to the following:

Wisconsin Department of Natural Resources
Attn: Jill Schoen, Waste & Materials Management Program Manager
1300 W. Clairemont Avenue
Eau Claire, WI 54701

Wisconsin Department of Natural Resources
Attn: Chris Saari – Hydrogeologist
2501 Golf Course Road
Ashland, WI 54806

11. Pursuant to s. NR 670.079(2)(c), Wis. Adm. Code, this remediation variance may be renewed or extended only after opportunity for a public hearing. Requests to extend or renew this remediation variance shall be submitted to the Department 90 days prior to its expiration date, May 18, 2022.
12. The Department may, at any time, revoke this remediation variance if the Department determines that the conditions stated herein are not complied with or if revocation is necessary to protect human health or the environment.

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes and administrative codes establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the Department to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.

Dated: May 18, 2017

DEPARTMENT OF NATURAL RESOURCES

For the Secretary

A handwritten signature in black ink, appearing to read 'John Robinson', is written over a horizontal line.

John Robinson
Northern Region Supervisor
Remediation & Redevelopment Program